

WHAT IS CLAIMED IS:

1. An image printing apparatus which includes a plurality of image printing means for printing images of different colors and prints a color image by superimposing,
5 on a single image printing medium, a plurality of images of the respective colors printed by the plurality of image printing means, comprising:

test image printing means for printing, on the image printing medium, test images for correcting a positional
10 offset between images of the respective colors;

correction amount deriving means for deriving a positional offset correction amount for the images of the respective colors by measuring the test images printed on the image printing medium;

15 correction means for correcting a printing position of an image printed by said each image printing means; and

control means for controlling a series of correcting operations for correcting a positional offset between the images of the respective colors,

20 wherein said control means executes the correcting operation in a first stage and a second stage, corrects a positional offset on a pixel basis in the first state until the positional offset correction amount reaches a predetermined target range, and corrects a positional
25 offset including a correction amount less than a pixel unit in the second stage.

2. An apparatus according to claim 1, wherein said

control means derives a correction amount by executing printing and measurement of the test images in the first stage, and performs correction in the second stage on the basis of a correction amount left unprocessed in the first stage.

3. An apparatus according to claim 1, wherein a time required for correction on a pixel basis is shorter than a time required for correction with an amount less than a pixel unit.

10 4. An apparatus according to claim 1, wherein correction with an amount less than the pixel unit is performed by surface phase control on polygon mirrors.

5. An image printing apparatus which includes a plurality of image printing means for printing images of different colors and prints a color image by superimposing, on a single image printing medium, a plurality of images of the respective colors printed by the plurality of image printing means, comprising:

20 test image printing means for printing, on the image printing medium, test images for correcting a positional offset between images of the respective colors;

correction amount deriving means for deriving a positional offset correction amount for the images of the respective colors by measuring the test images printed on the image printing medium;

25 correction means for correcting a printing position of an image printed by said each image printing means; and

control means for controlling a series of correcting operations for correcting a positional offset between the images of the respective colors,

wherein after deriving a positional offset correction amount by printing and measuring test images, said control means repeatedly executes correction of a printing position of an image on the basis of the positional offset correction amount, corrects a positional offset of an image on a pixel basis while the derived positional offset correction amount has not reached a predetermined target range, and corrects a printing position of an image including a correction amount less than a pixel unit when the positional offset correction amount has reached the target range.

6. An apparatus according to claim 5, wherein while the positional offset correction amount has not reached the target range, said control means corrects the positional offset of the image on a pixel basis by repeatedly printing the test images, measuring the test images, deriving the positional offset correction amount, and correcting a printing position of an image.

7. An apparatus according to claim 5, wherein said control means finishes a series of correcting operations by executing correction including a correction amount less than the pixel unit.

8. An apparatus according to claim 5, wherein a time required for correction on a pixel basis is shorter than a

time required for correction with an amount less than a pixel unit.

9. An apparatus according to claim 5, wherein correction with an amount less than the pixel unit is performed by surface phase control on polygon mirrors.

10. A color misregistration correction method in an image printing apparatus which includes a plurality of image printing means for printing images of different colors and prints a color image by superimposing, on a single image printing medium, a plurality of images of the respective colors printed by the plurality of image printing means, comprising:

executing color misregistration correction in a first stage and a second stage after the first stage;

15 correcting a positional offset on a pixel basis in the first stage until a positional offset correction amount for images of the respective colors reaches a predetermined target range; and

correcting a positional offset including a positional offset correction amount less than a pixel unit in the second stage.

11. A color misregistration correction method in an image printing apparatus which includes a plurality of image printing means for printing images of different colors and prints a color image by superimposing, on a single image printing medium, a plurality of images of the respective colors printed by the plurality of image

printing means, comprising the steps of:

(a) printing, on the image printing medium, test images for correcting a positional offset between images of the respective colors;

5 (b) deriving a positional offset correction amount for the images of the respective colors by measuring the test images;

(c) correcting a positional offset between the images of the respective colors on the basis of the
10 positional offset correction amount;

(d) repeating the steps (a) to (c) until the positional offset correction amount reaches a predetermined target range; and

correcting the positional offset between the images
15 of the respective colors including a positional offset with an amount less than a pixel unit when the positional offset correction amount reaches the target range.

12. A method according to claim 11, wherein a time required for correction on a pixel basis is shorter than a
20 time required for correction with an amount less than a pixel unit.

13. A method according to claim 11, wherein correction with an amount less than the pixel unit is performed by surface phase control on polygon mirrors.